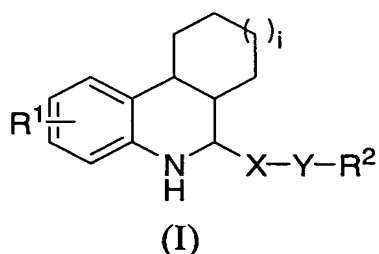


CLAIMS

1. A tetrahydroquinoline derivative represented by the following formula (I), or pharmacologically acceptable salts thereof:



- where R¹ represents a nitro group or a cyano group;
i represents 0 or 1;
X represents an alkylene group having 1 - 5 carbon atoms
10 which may be substituted by a substituent selected from the group consisting of an alkyl group having 1 - 6 carbon atoms and a cycloalkyl group having 3 - 7 carbon atoms;
Y represents -NR³CO-, -NR³SO₂-, -NR³CONH- or -NR³CSNH- (where R³ represents a hydrogen atom, an alkyl group having 1 - 6
15 carbon atoms, a cycloalkyl group having 3 - 7 carbon atoms, or an aralkyl group having 7 - 9 carbon atoms); and
R² represents a phenyl group which may be substituted by 1 - 3 independent R⁴'s, or a heteroaryl group which may be substituted by 1 - 3 independent R⁴'s [where R⁴ and R⁴'
20 independently represent an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom, a halogen atom, a nitro group, a cyano group, -A-R^{5A} {where A is -CO-, -CO₂-, -CONR⁶-, -O-, -OCO-, -NR⁶-, -NR⁶CO-, -NR⁶SO₂-,

-NR⁶CONH-, -NR⁶CSNH- or -NR⁶COO- (where R⁶ independently has
 the same meaning as the aforementioned R³), and R^{5A}
 represents a hydrogen atom, an alkyl group having 1 - 6
 carbon atoms which may be substituted by a fluorine atom,
 5 or a cycloalkyl group having 3 - 7 carbon atoms}, or
 -B-(CH₂)_n-R^{5B} {where B represents a single bond, -CO-, -CO₂-,
 -CONR^{6'}-, -O-, -OCO-, -NR^{6'}-, -NR^{6'}CO-, -NR^{6'}SO₂-,
 -NR^{6'}CONH-, -NR^{6'}CSNH- or -NR^{6'}COO- (where R^{6'} independently
 has the same meaning as the aforementioned R³), n
 10 represents an integer of 1 or 2, and R^{5B} represents an alkyl
 group having 1 - 6 carbon atoms which may be substituted by
 a fluorine atom, a cycloalkyl group having 3 - 7 carbon
 atoms, a halogen atom, a hydroxyl group, a cyano group, an
 alkoxy group having 1 - 5 carbon atoms, or -NR^{7'}R^{8'} (where
 15 R^{7'} and R^{8'} independently have the same meaning as the
 aforementioned R³)}, or -C≡C-R⁹ {where R⁹ represents a
 hydrogen atom, an alkyl group having 1 - 6 carbon atoms
 which may be substituted by a fluorine atom, a cycloalkyl
 group having 3 - 7 carbon atoms, or an aryl group which may
 20 be substituted by R¹⁰ (where R¹⁰ represents an alkyl group
 having 1 - 6 carbon atoms which may be substituted by a
 fluorine atom, or a halogen atom)}.

2. The tetrahydroquinoline derivative or
 pharmacologically acceptable salts thereof according to
 25 claim 1, wherein i is 0, X is -C(CH₃)₂-CH₂-, Y is -NHCO- or
 -NHCONH-, and R² represents a phenyl group which may be
 substituted by 1 - 3 independent R⁴'s, or a heteroaryl
 group which may be substituted by 1 - 3 independent R⁴'s

[where R^4 and $R^{4'}$ independently represent an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom, a halogen atom, $-A-R^{5A}$ {where A represents $-CO-$, $-O-$, $-OCO-$, $-NR^6-$, $-NR^6CO-$ or $-NR^6CONH-$ (where R^6 represents a hydrogen atom or a methyl group), and R^{5A} represents a hydrogen atom, an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom, or a cycloalkyl group having 3 - 7 carbon atoms}, or $-B-(CH_2)_n-R^{5B}$ {where B represents $-CO-$, $-O-$, $-OCO-$, $-NR^{6'}-$, $-NR^{6'}CO-$ or $-NR^{6'}CONH-$ (where $R^{6'}$ represents a hydrogen atom or a methyl group), n represents an integer of 1 or 2, and R^{5B} represents an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom, a cycloalkyl group having 3 - 7 carbon atoms, or an alkoxy group having 1 - 5 carbon atoms}].

3. The tetrahydroquinoline derivative or pharmacologically acceptable salts thereof according to claim 1, wherein i is 0, X is $-C(CH_3)_2-CH_2-$, Y is $-NHCO-$, and R^2 is a phenyl group which may be substituted by 1 - 3 independent R^4 's, or a heteroaryl group which may be substituted by 1 - 3 independent $R^{4'}$'s [where R^4 and $R^{4'}$ independently represent an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom, a halogen atom, $-A-R^{5A}$ {where A represents $-CO-$, $-O-$, $-OCO-$, $-NH-$, $-NHCO-$ or $-NHCONH-$, and R^{5A} represents a hydrogen atom, an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom, or a cycloalkyl group having 3 - 7 carbon atoms}, or $-B-(CH_2)_n-R^{5B}$ {where B

represents -CO-, -O-, -OCO-, -NH-, -NHCO- or -NHCONH-, n represents an integer of 1 or 2, and R^{5B} represents an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom, a cycloalkyl group having 3 - 7 carbon atoms, or an alkoxy group having 1 - 5 carbon atoms}].

4. The tetrahydroquinoline derivative or pharmacologically acceptable salts thereof according to claim 1, wherein i is 0, X is -C(CH₃)₂-CH₂-, Y is -NHCO-, and R² is a heteroaryl group which may be substituted by 1 - 3 independent R^{4'}'s {where R^{4'} represents an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom, a halogen atom, -A-R^{5A} (where A represents -O- or -NHCO-, and R^{5A} represents a hydrogen atom, or an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom), or -B-CH₂-R^{5B} (where B represents -O- or -NHCO-, and R^{5B} represents an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom, or an alkoxy group having 1 - 5 carbon atoms))}.

5. The tetrahydroquinoline derivative or pharmacologically acceptable salts thereof according to claim 3, wherein R² is a phenyl group having substituent R⁴ at 4-position, or a 6-membered heteroaryl group having substituent R^{4'} at 4-position [where R⁴ and R^{4'} independently represent a halogen atom, -O-R^{5A}, or -NHCO-R^{5A} (where R^{5A} represents a hydrogen atom, or an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom)].

6. The tetrahydroquinoline derivative or

pharmacologically acceptable salts thereof according to claim 3, wherein R^2 is a phenyl group having substituent R^4 at 4-position, or a 6-membered heteroaryl group having substituent $R^{4'}$ at 4-position [where R^4 and $R^{4'}$ independently
5 represent $-NHCO-R^{5A}$ (where R^{5A} represents a hydrogen atom, or an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom)].

7. The tetrahydroquinoline derivative or pharmacologically acceptable salts thereof according to
10 claim 1, wherein i is 0, X is $-C(CH_3)_2-CH_2-$, Y is $-NHCO-$, and R^2 is $-C\equiv C-R^9$ {where R^9 represents an alkyl group having 1 - 6 carbon atoms which may be substituted by a fluorine atom, or an aryl group which may be substituted by R^{10} (where R^{10} represents an alkyl group having 1 - 6 carbon
15 atoms which may be substituted by a fluorine atom, or a halogen atom)}}.

8. The tetrahydroquinoline derivative or pharmacologically acceptable salts thereof according to claim 7, wherein R^9 represents an alkyl group having 1 - 6
20 carbon atoms which may be substituted by a fluorine atom, or a phenyl group.

9. A pharmaceutical comprising the tetrahydroquinoline derivative or pharmacologically acceptable salts thereof according to any one of claims 1 to 8 as an active
25 ingredient.

10. The pharmaceutical according to claim 9 which is an androgen receptor agonist.

11. The pharmaceutical according to claim 10 which can

be used in preventing or treating osteoporosis or wasting disease.

12. The pharmaceutical according to claim 10 which can be used in preventing or treating a disease selected from
5 the group consisting of male hypogonadism, male sexual dysfunction, abnormal sex differentiation, male delayed puberty, carcinoma of female genitalia, breast cancer, mastopathy, endometriosis and female sexual dysfunction.

13. The pharmaceutical according to claim 10 which can
10 be used in preventing or treating hematopoietic dysfunction and a disease related thereto.

14. A method for preventing or treating wasting disease or osteoporosis, comprising administering the tetrahydroquinoline derivative or pharmacologically
15 acceptable salts thereof according to any one of claims 1 to 8, in an amount effective for prevention or treatment of such disease, to a mammal requiring such prevention or treatment.

15. A method for preventing or treating a disease
20 selected from the group consisting of male hypogonadism, male sexual dysfunction, abnormal sex differentiation, male delayed puberty, carcinoma of female genitalia, breast cancer, mastopathy, endometriosis and female sexual dysfunction, said method comprising administering the
25 tetrahydroquinoline derivative or pharmacologically acceptable salts thereof according to any one of claims 1 to 8, in an amount effective for prevention or treatment of such disease, to a mammal requiring such prevention or

treatment.

16. A method for preventing or treating hematopoietic dysfunction and a disease related thereto, said method comprising administering the tetrahydroquinoline derivative
5 or pharmacologically acceptable salts thereof according to any one of claims 1 to 8, in an amount effective for prevention or treatment of such disease, to a mammal requiring such prevention or treatment.